

Reply to Office Action of January 18, 2005
Amendment Dated: March 24, 2005

Appl. No.: 10/727,252
Attorney Docket No.: H0005762

Listing of Claims

1 Claim 1 (Currently Amended): A method of enabling an operator to remotely
2 manage a plurality of field devices designed to implement a ~~manufacturing~~ process in a
3 ~~manufacturing~~ plant, said ~~manufacturing~~ plant further containing a field device
4 management station (FDMS) coupled to said plurality of field devices by a control
5 network, said method comprising:

6 providing a wireless connection from a first client, wherein said wireless connection
7 provides communication between said first client and said FDMS;

8 enabling said operator to issue a first command from said first client to a first field
9 device contained in said plurality of field devices;

10 transferring said first command from said first client to said FDMS on said wireless
11 connection; ~~and~~

12 forwarding said first command from said FDMS to said first field device on said
13 control network,

14 whereby said operator ~~can~~ manages said plurality of field devices using said first
15 client;

16 providing a wire-based connection between a second client and said FDMS;

17 transferring another command from said second client to said FDMS on said
18 wire-based medium, said another command being directed to a second device contained
19 in said plurality of field devices; and

20 forwarding said another command from said FDMS to said second field device,

21 whereby commands from said first client and said second client are channeled
22 through said FDMS.

1 Claim 2 (Currently Amended): The method of claim 1, further comprising:

2 connecting said first client to a second field device contained in said plurality of
3 field devices;

4 transferring a second command from said FDMS to said first client using said
5 wireless connection, wherein said second command is directed to said second field device;

Reply to Office Action of January 18, 2005
Amendment Dated: March 24, 2005

Appl. No.: 10/727,252
Attorney Docket No.: H0005762

6 and
7 sending said second command from said first client to said second field device,
8 whereby said second command is forwarded from said FDMS to said ~~to said~~ second field
9 device without using said control network.

1 Claim 3 (Original): The method of claim 2, further comprising enabling said
2 operator to issue said second command from said first client, wherein said FDMS receives
3 said second command and performs said transferring said second command.

1 Claim 4 (Original): The method of claim 1, wherein said wireless connection is
2 provided between said FDMS and said first client.

1 Claim 5 (Original): The method of claim 1, wherein said wireless connection is
2 provided between said first client and a network device, wherein said network device is
3 connected to a network connecting said network device to said FDMS by a wire-based
4 medium.

1 Claim 6 (Canceled): The method of claim 1, further comprising a second client
2 connected to said FDMS by a wire-based medium, said method further comprising:
3 transferring another command from said second client to said FDMS on said
4 wire-based medium, said another command being directed to a second device contained
5 in said plurality of field devices; and
6 forwarding said another command from said FDMS to said second field device,
7 whereby commands from clients connected by both wire-based and wireless
8 mediums are channeled through said FDMS.

1 Claim 7 (Currently Amended): The method of claim 6 1, maintaining a central log
2 of said first command and said another command in said FDMS, wherein said central log
3 is updated within a short time after said operator issues said first command and said

Reply to Office Action of January 18, 2005
Amendment Dated: March 24, 2005

Appl. No.: 10/727,252
Attorney Docket No.: H0005762

4 ~~another command, wherein use of said wire-less connection enables said FDMS to easily~~
5 ~~maintain said central log and also for said operator to manage said plurality of field~~
6 ~~devices using said first client.~~

1 Claim 8 (Currently Amended): A field device management station (FDMS)
2 enabling management of a plurality of field devices, said plurality of field devices being
3 coupled to said FDMS by a control network, said FDMS comprising:

4 a wireless interface providing connectivity to a first client by a wireless medium;
5 and

6 a data manager block receiving a first command from said first client on said
7 wireless medium, said first command being directed to a first field device contained in said
8 plurality of field devices, said data manager forwarding said first command from on said
9 control network,

10 wherein said first command is issued by an operator such that said operator can
11 manages said plurality of field devices using said first client,;

12 a wire-line interface providing connectivity to a second client by a wire-line based
13 medium.

14 said data manager block receiving a second command from said second client by
15 said wire-line based medium, said second command being directed to a second field device
16 contained in said plurality of devices, said data manager block forwarding said second
17 command to said second field device on said control network.

1 Claim 9 (Original): The FDMS of claim 8, wherein said data manager block is
2 operable to receive a second command from said first client on said wireless medium, said
3 second command being directed to a second field device contained in said plurality of field
4 devices, said second field device being connected to said first client, said data manager
5 block forwarding said second command on said wireless medium to said first client.

1 Claim 10 (Canceled): The FDMS of claim 9, further comprising a wire-line

Reply to Office Action of January 18, 2005
Amendment Dated: March 24, 2005

Appl. No.: 10/727,252
Attorney Docket No.: H0005762

2 interface providing connectivity to a second client by a wire-line based medium, said data
3 manager block receiving a second command from said second client, said second
4 command being directed to a second field device contained in said plurality of devices,
5 said data manager block forwarding said second command to said second field device on
6 said control network.

1 Claim 11 (Currently Amended): The FDMS of claim 9, further comprising:
2 a wireless client handler provided between said wireless interface and said data
3 manager, said wireless client handler receiving said first command on said wireless
4 medium, said wireless client handler further receiving a first response from said data
5 manager block and forwarding said first response on said wireless medium; and
6 a wire-line client handler provided between said wire-line interface and said data
7 manager, said wire-based client handler receiving said second command on said
8 wire-based medium, said wire-based client handler further receiving a second response
9 from said data manager block and forwarding said second response on said wire-based
10 medium.

1 12 (Original): The FDMS of claim 11, wherein said data manager receives a
2 request to establish a connection from said first client and instantiates said wireless client
3 handler in response to receiving said request.

1 Claim 13 (Currently Amended): The FDMS of claim 9, wherein said data manager
2 maintains a central log containing information on said first command and said second
3 command, ~~wherein maintenance of said central log is simplified due to routing of said first~~
4 ~~command and said second command through said FDMS.~~

1 Claim 14 (Original): A computer readable medium carrying one or more sequences
2 of instructions for causing a field device management station (FDMS) to enable
3 management of a plurality of field devices, said plurality of field devices being coupled

Reply to Office Action of January 18, 2005
Amendment Dated: March 24, 2005

Appl. No.: 10/727,252
Attorney Docket No.: H0005762

4 to said FDMS by a control network, wherein execution of said one or more sequences of
5 instructions by one or more processors contained in said FDMS causes said one or more
6 processors to perform the actions of:

7 receiving a first command from said first client on a wireless medium, said first
8 command being directed to a first field device contained in said plurality of field devices;
9 and

10 forwarding said first command on said control network to said first field device,
11 wherein said first command is issued by an operator such that said operator can
12 manage said plurality of field devices using said first client;

13 receiving a third command from a third client on a wire-line based medium, said
14 third command being directed to a third field device contained in said plurality of devices;
15 and

16 forwarding said third command to said third field device on said control network.

1 Claim 15 (Original): The computer readable medium of claim 14, further
2 comprising:

3 receiving a second command from said first client on said wireless medium, said
4 second command being directed to a second field device contained in said plurality of field
5 devices, said second field device being connected to said first client; and

6 forwarding said second command on said wireless medium to said first client.

1 Claim 16 (Canceled): The computer readable medium of claim 15, further
2 comprising:

3 receiving a third command from said third client on a wire-line based medium, said
4 third command being directed to a third field device contained in said plurality of devices;
5 and

6 forwarding said third command to said third field device on said control network.

Reply to Office Action of January 18, 2005
Amendment Dated: March 24, 2005

Appl. No.: 10/727,252
Attorney Docket No.: H0005762

1 Claim 17 (Currently Amended): The computer readable medium of claim 15,
2 further comprising maintaining a central log containing information on said first command
3 and said second command, ~~wherein maintenance of said central log is simplified due to~~
4 ~~routing of said first command and said second command through said FDMS.~~

1 Claim 18 (Currently Amended): A computer readable medium carrying one or
2 more sequences of instructions for causing a client to enable remote management of a
3 plurality of field devices, said plurality of field devices being coupled to a field device
4 management station (FDMS) by a control network, wherein execution of said one or more
5 sequences of instructions by one or more processors contained in said client causes said
6 one or more processors to perform the actions of:

7 sending a first command to said FDMS on a wireless medium, said first command
8 being directed to a first field device contained in said plurality of field devices; and

9 receiving a first response on said wireless medium from said FDMS;

10 wherein said first command is issued by an operator such that said operator ~~can~~
11 manages said plurality of field devices using said first client,;

12 wherein said client is connected to a second field device by a path,

13 sending a second command to said FDMS on said wireless medium, said second
14 command being directed to a second field device contained in said plurality of field
15 devices;

16 receiving said second command from said FDMS on said wireless medium; and

17 forwarding said second command to said second field device on said path after said
18 receiving from said FDMS.

1 Claim 19 (Canceled): The computer readable medium of claim 18, wherein said
2 client is connected to a second device, further comprising:

3 sending a second command to said FDMS on said wireless medium, said second
4 command being directed to a second field device contained in said plurality of field
5 devices;

Reply to Office Action of January 18, 2005
Amendment Dated: March 24, 2005

Appl. No.: 10/727,252
Attorney Docket No.: H0005762

6 receiving said second command from said FDMS on said wireless medium; and
7 forwarding said second command to said second device after said receiving from
8 said FDMS.